

therefore, be in an “unthrottled” state. Further, this is consistent with the specification which recites:

In the operation range where **throttled** intake air control is required, *the position of throttle valve 44 is variably adjusted* by an actuator in the form of a motor 45 to control intake air into combustion chamber 16 and intake valve closure (IVC) timing is adjusted by EMD 86 to provide a valve opening duration in the neighborhood of the least duration. In the operation range where **unthrottled** intake air control is required, IVC control is performed and *the position of throttle valve 44 is adjusted* so as to maintain boost pressure within the intake manifold at a target negative pressure value. In IVC control, intake valve closure (IVC) timing is variably adjusted to control intake air into the combustion chamber 16 **without relying on throttling of airflow by throttle valve 44.**

Page 7, lines 18-30 (with italic and bold emphasis added).

Accordingly, the recitation of a “throttle valve” in the preambles of claims 1 and 5 is not inconsistent with the recitation of the “unthrottled” condition in the body portions of the claims. Therefore, as the recitation of “throttle valve” and “unthrottled” in each of claims 1 and 5 is neither inconsistent nor indefinite, the rejection of claims 1 and 5 under § 112, ¶ 2 should be withdrawn.

## **2. Rejection of Claims 1, 5, 9, and 10**

The Examiner rejected claims 1, 5, 9, and 10 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,084,557 (“Luria”). For the reasons hereafter set forth, Applicants respectfully traverse this rejection.

Each of claims 1 and 5 recites (with italic emphasis added): “*damping* an operating signal for the intake valve relative to a change in acceleration or deceleration demand on the engine.” Luria does not teach or suggest “damping” of an operating signal. Rather, as later explained in detail, Luria teaches a delay (also called a “phase shift”) in the closure timing of the intake valve 8 in response to accelerator pedal 62 depression. Specifically, the following exemplary portions of Luria all indicate that a delay (rather than damping) in closure timing is created: (a) Abstract (lines 7-9); (b) col. 2, lines 21-25; (c) col. 4, lines 3-12; and (d) col. 4, lines 27-54.

In Luria, the absolute accelerator pedal depression (rather than acceleration/ deceleration demand on the engine) is mechanically converted into the phase of the auxiliary camshaft 32 (which corresponds to the valve closure timing) through a rotation of the worm 60. As a result, there is a stepwise delay for the closure timing in response to a stepwise change in the position of the pedal 62, *i.e.*, the delay in Luria retards the valve closure timing

after the start of the compression stroke. Further, the delay is increased when moving toward a lower engine output. *See* col. 4, lines 8-10. By way of contrast, in the present invention, the operating signal for the intake valve closure timing (created in response to a change in acceleration or deceleration demand on the engine) is damped. Thus, unlike the *damped* response recited in claims 1 and 5, the closure timing in Luria is *delayed* in a stepwise manner when the accelerator pedal is released in a stepwise manner.

Accordingly, as Luria fails to teach or suggest at least the damping limitation recited in each of claims 1 and 5, it can not be used to reject the claims under § 102(b). Further, as claims 9 and 10 depend from claim 1 (and, therefore, recite all of the limitations of claim 1), these claims are also patentable over Luria, without regard to the other patentable limitations recited therein. Therefore, in light of Luria's failure to teach or suggest each of the limitations of claims 1, 5, 9, and 10, Applicants earnestly solicit a withdrawal of the rejection of these claims under § 102(b).

### CONCLUSION

For the reasons stated above, claims 1-10 are now in condition for allowance. A Notice of Allowance at an early date is respectfully requested. The Examiner is invited to contact the undersigned if such communication would expedite the prosecution of the application.

Respectfully submitted,

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